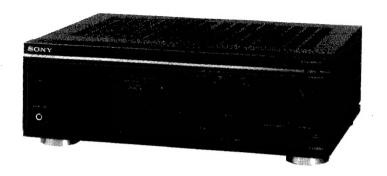
# TA-F550ES

# **SERVICE MANUAL**

Canadian Model AEP Model UK Model



#### **SPECIFICATIONS**

#### Amplifier section

Item	Condition		dition	Data	
Continuous RMS power output (both channels drivern	4 ohms, 20 Hz THD 0.008 %	z-20 kHz	EXCEPT AEP model	120 W + 120 W (THD 0.01%) (DIN: 175 W + 175 W)	
simultaneously)	6 ohms, 20 Hz THD 0.006 %	z-20 kHz	EXCEPT AEP model	100 W + 100 W (DIN: 140 W + 140 W)	
			AEP model	95 W + 95 W (DIN: 120 W + 120 W)	
	8 ohms, 20 Hz THD 0.004 %	z-20 kHz	EXCEPT AEP model	90 W + 90 W (DIN: 115 W + 115 W)	
			AEP model	80 W + 80 W (DIN: 100 W + 100 W)	
Power band width (IHF)	8 ohms,THD 0.02 %			10 Hz - 10 kHz at 45 W	
Dynamic headroom ('78 IHF)	4ohms			2dB	
	8ohms			1.2dB	
Total harmonic distortion	8 ohms, at 10	watt outpu	t	0.003 %	
Intermodulation (IM) distortion	4 ohm, at rated output			0.008 %	
60 Hz: 7 kHz = 4:1	6 ohm, at rated output			0.006 %	
	8 ohm, at rated output			0.004 %	
Danping factor	8 ohms, 1 kHz	2		100	
Residual noise	network A			less than 90 µ V	
Frequency response	PHONO MM			RIAA equalization curve ± 0.2 dB	
	TUNER, CD, TAPE 1, 2, 3, DIRECT IN			2 Hz - 200Hz +0 dB	
Input sensitivity	PHONO N	VC .		0.17mV, 100 ohms.	
	N N	ΜМ		2.5 mV, 50 kohms	
	TUNER, CD, DIRECT IN, TAPE 1, 2, 3 ADAPTOR IN			150 mV, 20kohms	

-Continued on page 2-





S/N (network)	PHONO	MC	77 (0.5mV)		
. 30 (115)		ММ	95 (5.0mV)		
* 78 (IHF)	TUNER, CI ADAPTOR	D. DIRECT IN, TAPE 1, 2, 3	108 (150mV)		
Output voltage impedance	REC OUT ADAPTOR		150mV, 1kom		
	HEADPHO	NES	25 miliwatts (at 80ohms) Accepts low and high impedance headphones.		
Tone controls	BASS, at	100 Hz	± 6.5 dB (turnover freq. 400 Hz)		
	TREVLE, a	t 10 kHz	±6 dB (freq. 5kHz)		
SUBSONIC filter			6 dB/octave attenuation below 15 Hz		

#### General

system Preamplifier section: Low-noise high gain NFB type equalizer amplifier, passive type direct tone control Power amplifier section: Pure-complementary SEPP power amplifier

Power requirements

AEP, West Germany models: 220 V AC, 50Hz

UK model: 240 V AC, 50Hz Canadian model: 120V AC, 50Hz

#### Power consumption

Canadian	520 VA
AEP	210 W
UK	620 W
West Germany	330 W

#### AC outlet (Canadian model only)

2 switched, 1 unswitched, 100 watts max.each

#### **Dimensions**

Approx.  $430 \times 150 \times 370$ mm (w/h/d) (18  $1/2 \times 5 \ 7/8 \times 14 \ 9/16$  inches)

#### Weight

Approx. 11.6kg (25 lbs 10 oz) net

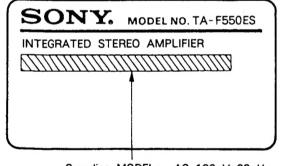
Design and specifications subject to change without notice.

#### Note

This appliance conforms with EEC directive 87/308/EEC regarding interference suppression.

#### MODEL IDENTIFICATION

- Specification Label -



Canadian MODEL: AC 120 V 60 Hz AEP, West Germany MODEL: AC 220 V  $\sim$  50/60 Hz

UK MODEL: AC 240 V  $\sim$  50/60 Hz

#### TABLE OF CONTENTS

Section	Title	<u>Pa</u>	ge
Specification · · · · · · · · · · · · · · · · · · ·	•••••		2
<ol> <li>GENERAL         Parts Identification · · · · · ·     </li> <li>ELECTRICAL ADJUSTMEN</li> </ol>			4
3-1. Printed Wiring Board 3-2. Schematic Diagram	•••••		13
4. EXPLODED VIEWS 5. ELECTRICAL PARTS LIST			

# SERVICING NOTES

## SAFETY CHECK-OUT

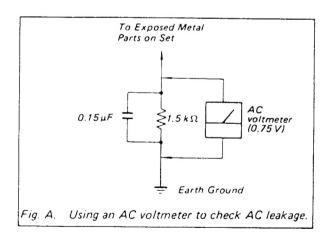
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

#### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)



#### SAFETY-RELATED COMPONENT WARNING!!

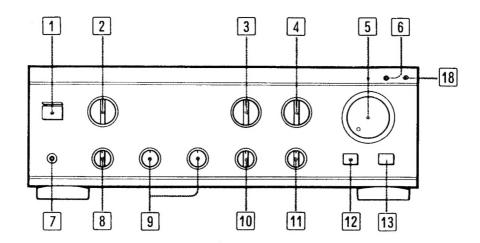
COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

#### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE A SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

# SECTION 1 GENERAL

#### Parts Identification



## 1 POWER switch and power/standby indicator

Immediately after turning ON the power, the standby indicator lights in red as the built-in muting circuit activates.

When the amplifier stays in a stable operating condition, the indicator lights in green.

The indicator lights in red when the unit detects shorting of circuit of the speaker outputs or in case of short-circuit of the inputs of DC components.

In such a case, disconnect the power source and check the connected components and speaker systems.

#### 2 SPEAKERS selector

Select speaker system A or B, or both.

# 3 ADAPTOR/DIRECT IN switch

Set to NORMAL to select program source by INPUT SELECTOR. To listen to a program source processed through adapter (graphic equalizer, for example) connected to ADAPTOR jacks, set the selector to ADAPTOR.

To listen to a program source connected to DIRECT IN jacks, set it to DIRECT IN.

Note that selecting ADAPTOR has no effect upon the signals output through the REC OUT jacks.

#### 4 INPUT SELECTOR

Selects the desired program source.

#### 5 ATTENUATOR knob

Regulates the sound level.

#### 6 MUTING switch and indicator

Generally, keep the switch released (OFF). Depress the switch to reduce the sound level by 20 dB. (Output voltage becomes 1/10.)

#### 7 HEADPHONES jack (stereo phone jack)

#### 8 MODE selector

STEREO: For listening to a stereo program. MONO: For listening to a monaural program.

### 9 BASS and TREBLE controls

#### 10 REC OUT SELECTOR

Selects the program source sent to the REC OUT jacks (rear panel).

#### BALANCE control

Controls the sound level of left and right speakers.

#### [12] SOURCE DIRECT switch and indicator

Depress the switch. The red indicator lights and the circuits of the tone control, subsonic filter switch, balance control and mode switch are disengaged without regard to the setting of the switches.

#### 13 CARTRIDGE selector

Set the selector according to your cartridge.
MM: For moving-magnet type cartridge
MC: For moving-coil type cartridge

#### 18 SUBSONIC filter switch

Depress the switch to reduce unwanted noise components of less than 15 Hz, which cause modulation noise.

# SECTION 2 ELECTRICAL ADJUSTMENTS

#### **PRECAUTIONS**

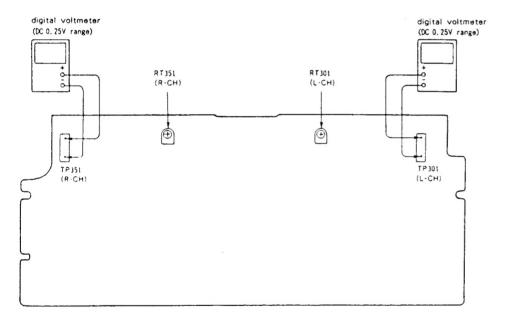
- 1. Adjust the idling after tuning the unit on for about 10-15 minutes, giving it time to warm up.
- 2. Always make sure to adjust the idling when repairing the power amp section or when replacing any parts.

#### [IDLING ADJUSTMENT]

#### Procedure:

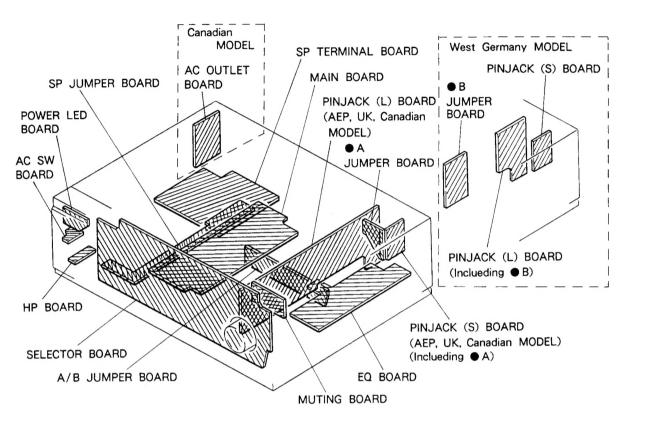
Set the ATTENUATOR control as low as possible and adjust RT301 (L-CH) and RT351 (R-CH) so that the voltmeter reads 7mV at TP301 (L-CH) and TP351 (R-CH).

#### Adjustment Location: power board



# SECTION 3 DIAGRAMS

### CIRCUIT BOARDS LOCATION

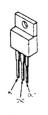


#### • Semiconductor Lead Layouts

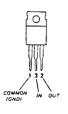
STK-3102N



M5F7815L



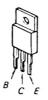
M5F7915L



2SA733-QP 2SC945-P 2SC2545



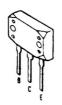
2SA985A 2SC2275A



2SA988-F



2SA1215M-0 2SC2921M-0



2SC3423



2SD774-34



UZL-7M1 1SS120 11ES2



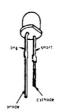
30DF2



SEL2213C-C



SEL2510C



SEL2810A-C

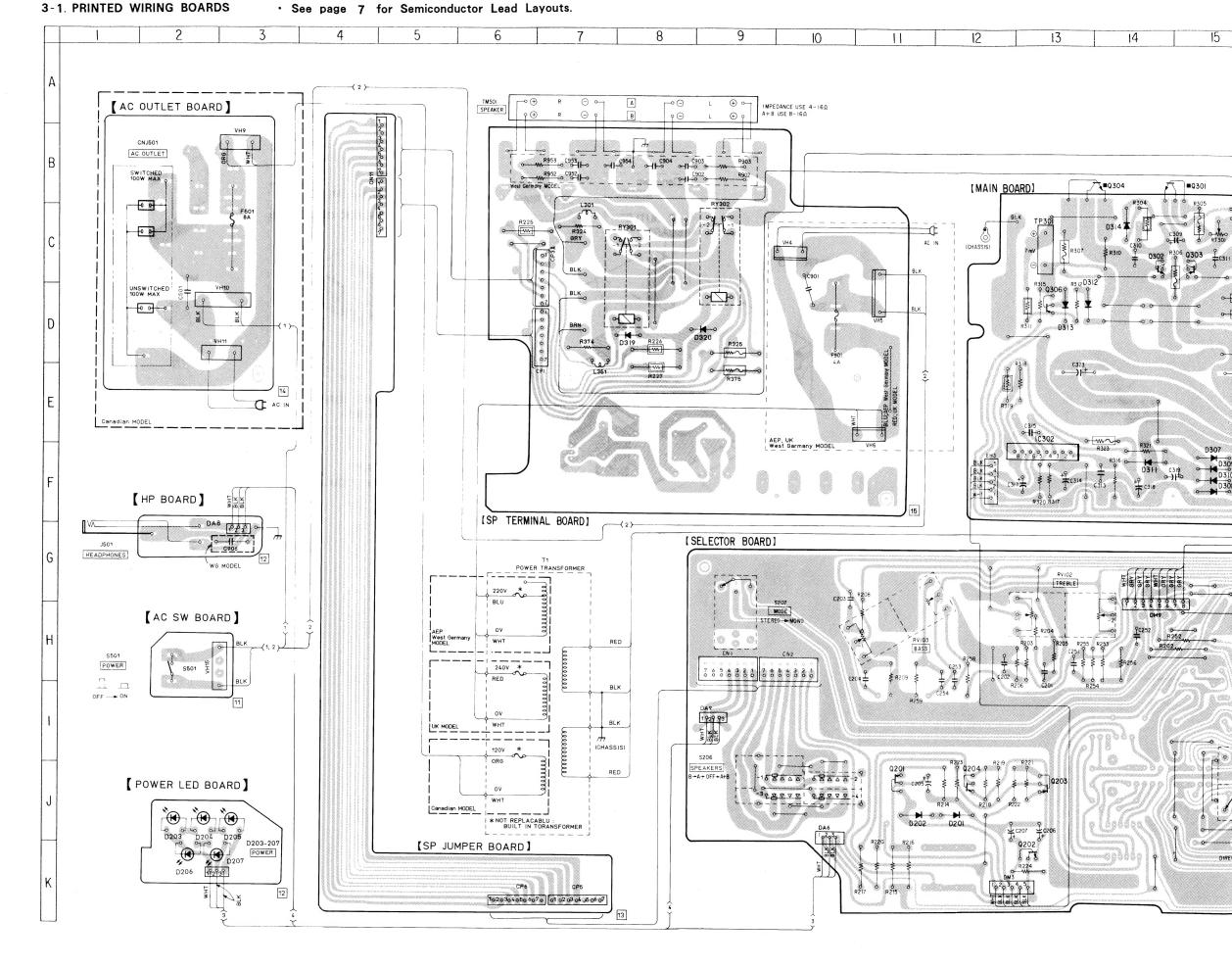


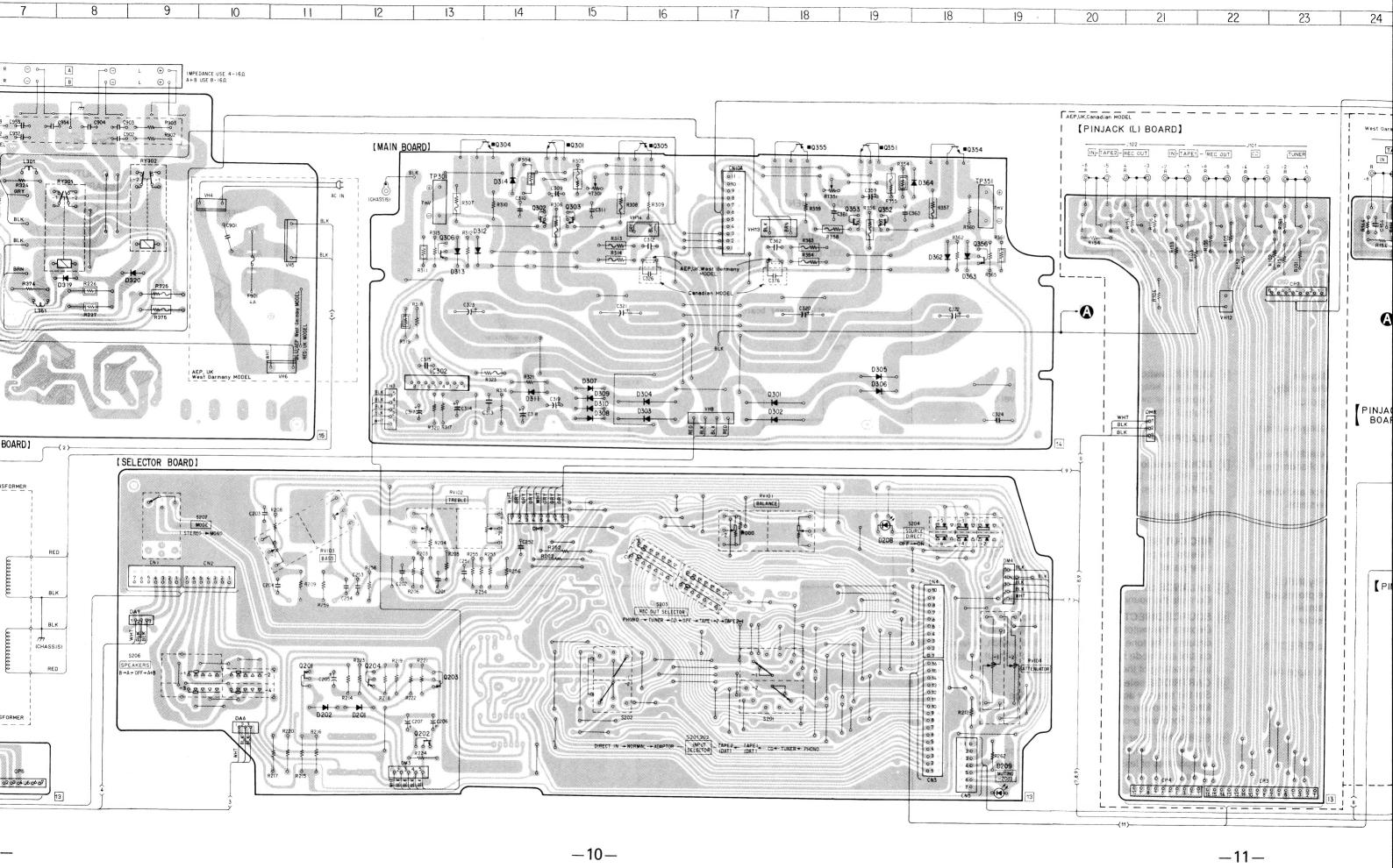
#### Semiconductor Location

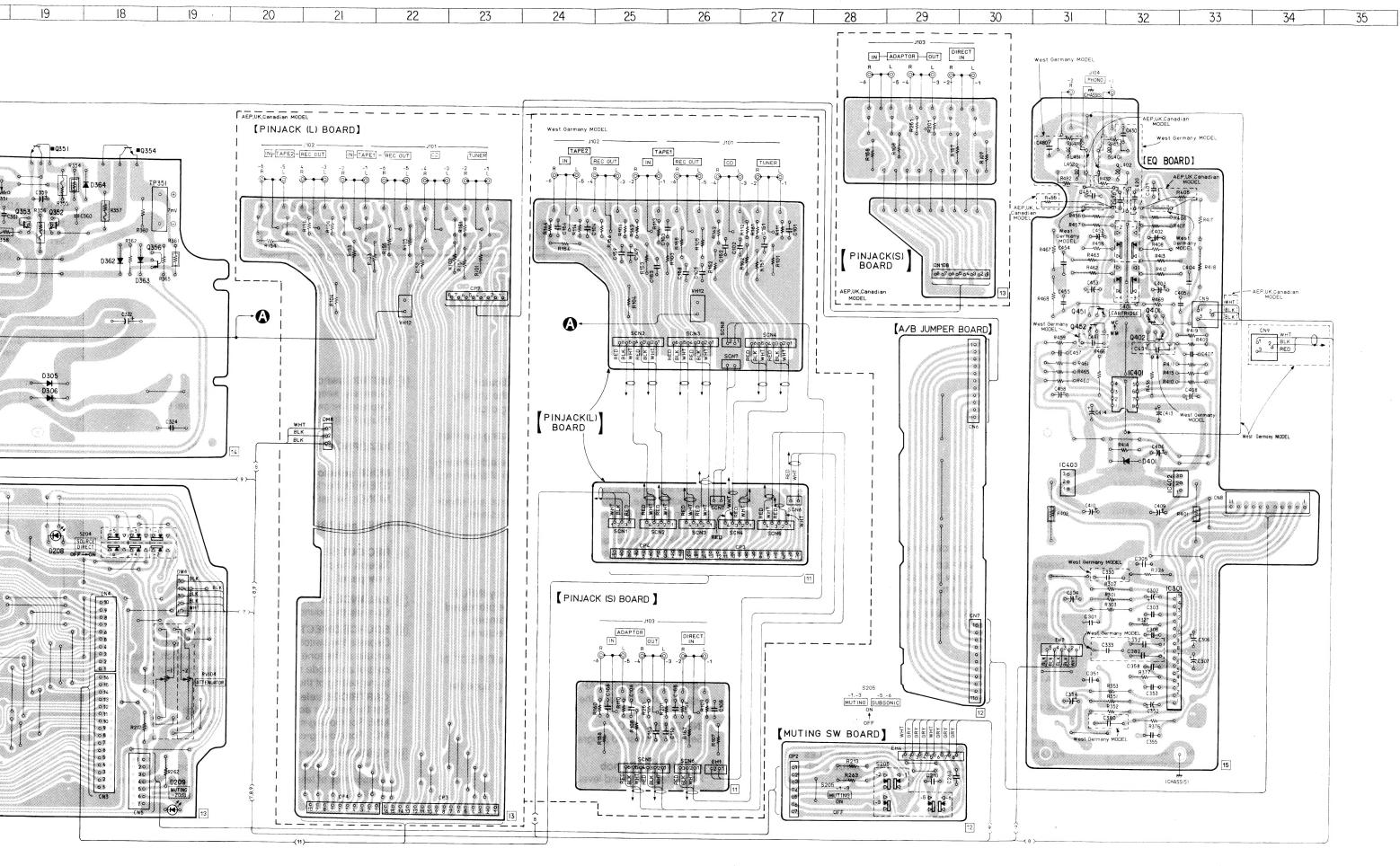
Ref. No.	Location	Ref. No.	Location
D201 D202	J-12 J-11	D401	F-34
D203 D204 D205 D206 D207 D208	J-2 J-2 J-3 K-2 K-3 H-19	IC301 IC302 IC401 IC402 IC403	I-35 F-13 F-34 G-35 G-33
D208 D209 D301 D302 D303 D304 D305 D306 D307 D308 D309 D311 D312 D313 D314 D319 D362 D363 D364	191 218866999555543334 8-11892200	Q201 Q202 Q203 Q204 Q301 Q302 Q303 Q304 Q305 Q351 Q352 Q354 Q355 Q356 Q401 Q451 Q452	J-11 K-13 J-12 B-15 C-14 B-16 B-19 B-19 B-19 B-21 B-21 B-33 E-33

#### Note on Mounting Diagram:

- o---: parts extracted from the component side.
- parts mounted on the conductor side.
- Pattern on the side which is seen.







[POWER LED BOARD]

-13-

REC OUT SELECTOR

150P

C158 T150P

R156 1K

TAPE I REC OUT

J102-4

TAPE 2

PHONO

TUNER

OFF

TAPE 1+2

S203-4

JI01-4 (CD)

TAPE IN

TAPE 2 IN

BOARD (1/2)

J102-6

PINJACK(L)

MUTING

BOARD(1/3)

В=

C205+ 4.7 50V

Q20I 2SD774 CURRENT REG

▼D202 R214 27 ▼D201

D20L202

US1060M

₹R317 100 220k 25V

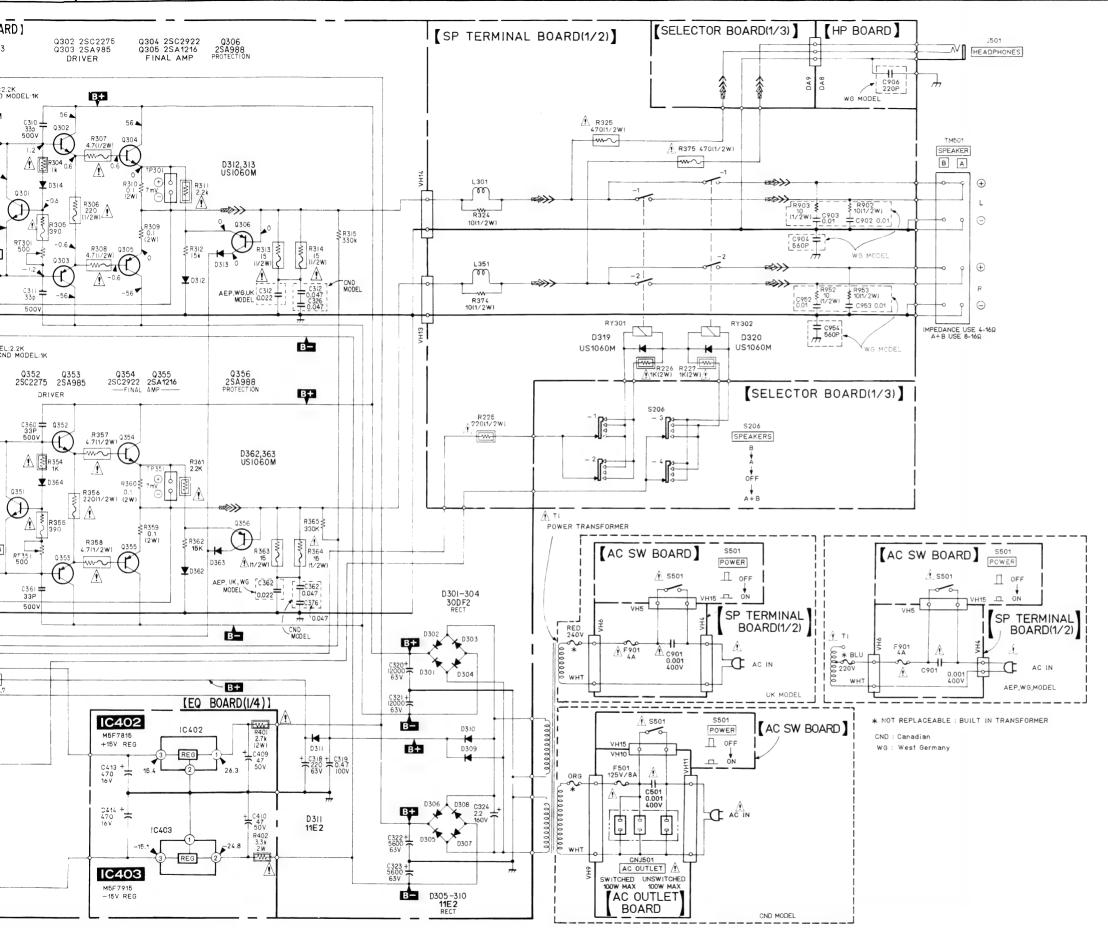
0 7 0.022

IC403

IC403

M5F7915 -15V REG





#### Note on Schematic Diagram:

- All capacitors are in  $\mu F$  unless otherwise noted. pF:  $\mu \mu F$  50WV or less are not indicated except for electrolytics and tablely ms
- All resistors are in  $\Omega$  and  $1/\!/_4\,W$  or less unless otherwise specified.
- nonflammable resistor.
- fusible resistor.

# Note: The components identified by mark A or dotted line with mark are critical for safety. Replace only with part number specified.

## Note:

Les composants identifiés par une marque sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spéci-

- B+ : B+ Line
- B- : B- Line
- adjustment for repair
- Voltage and waveforms are dc with respect to ground under no-signal conditions.

### no mark: PHONO

- Voltages are taken with a VOM (Input impedance 10M Ω)
   Voltage variations may be noted due to normal production tolerances.
- Voltage variations may be noted due to normal production tolerances.
- Signal path.

### : PHONO

- WG : West Germany
- CND : Canadian
- SP JUMPER BOARD, A/B JUMPER BOARD and a parts of connector ommitted from this circuit diagrams.

# SECTION 4 EXPLODED VIEWS

#### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example: (RED)...KNOB, BALANCE (WHITE)

Parts' Color

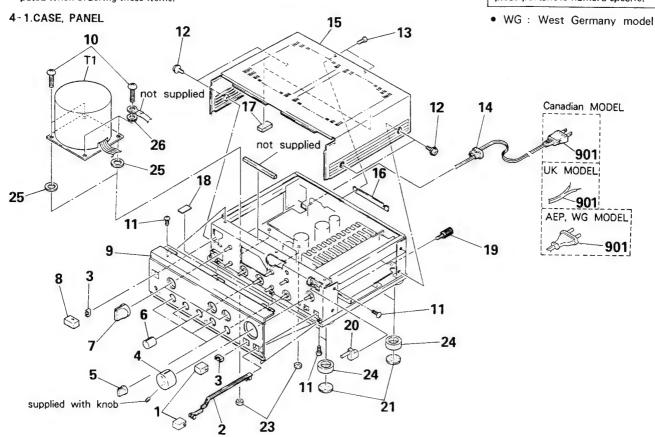
Cabinet's Color

The components identified by mark or dotted line with mark are critical for safety.

Replace only with part number specified.

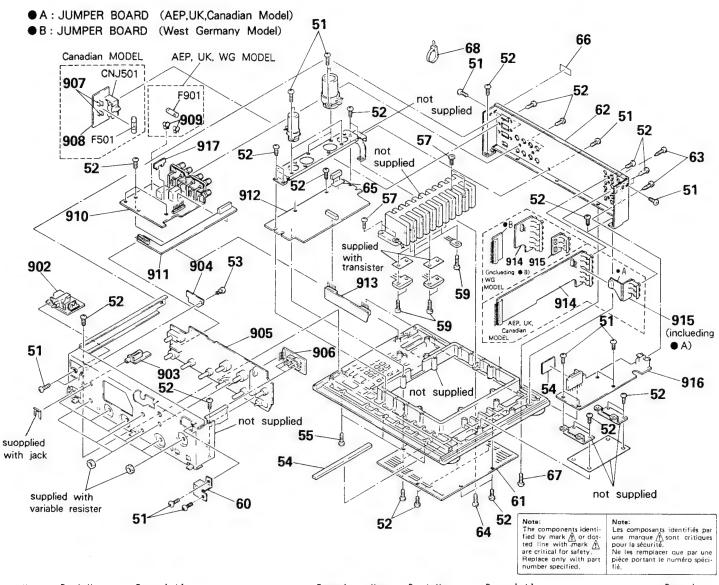
Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifé.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-908-875-01 4-908-875-12	(BLACK)KNOB, SQUARE (GRAY)KNOB, SQUARE		13 14	7-685-873-09 *3-703-244-00	SCREW +BVTT 3X10 (S) BUSHING (2104), CORD	
0	4-929-227-01	IOINT		15	4-916-737-31	(BLACK)CASE	
2	4-864-307-00	JOINT RING			4-916-737-51	(GRAY)CASE	
	4 000 004 03	(PLACK) (VICE (NA 40)		16	*4-929-232-01	SPACER	
4	4-929-224-01 4-929-224-11	(BLACK)KNOB (NA-48) (GRAY)KNOB (NA-48)		17	*2-527-517-00 *3-846-067-21	CUSHION, CASE RETAINER	
	4 323 224 11	(dia))kidb (iii 40)		19	*4-941-033-01	SPACER (C) SCREW, FIXED, FEEDER	
5	4-937-831-01	(BLACK)KNOB (FLAT-21)					
	4-937-831-11	(GRAY)KNOB (FLAT-21)		20	4-923-879-01 4-923-879-12	(BLACK)BUTTON (DIA.4)	
6	4-937-833-01	(BLACK)KNOB (ROUND-21)			4-923-079-12	(GRAY)BUTTON (DIA.4)	
	4-937-833-11	(GRAY)KNOB (ROUND-21)		21	*4-923-850-01	FOOT (DIA. 46)	
7	4-937-832-01	(BLACK)KNOB (FLAT-29)		23	7-684-024-04	N 4, TYPE 2	
,	4-937-832-11	(GRAY)KNOB (FLAT-29)		25	4-923-882-02 4-885-984-21	RING(LARGE-16),ORNAMENTAL,FOOT WASHER	
				26	7-623-423-07	LW 4, TYPE B	
8	4-908-856-01	(BLACK)KNOB, SQUARE				4	
	4-908-856-12	(GRAY)KNOB, SQUARE		901	3.1-574-383-11 3.1-574-884-11	(AEP, WG)CORD, POWER	TODA
9	A-4323-591-A	(AEP, WG: BLACK)PANEL ASSY, FR	ONT		1.1-575-105-11	(UK)CORD, POWER (WITH CONNEC (Canadian)CORD, POWER	, 10K )
	A-4323-673-A	(AEP, WG: GRAY)PANEL ASSY, FR				, canada and a same	
	A-4323-592-A	(UK,Canadian)PANEL ASSY, FR	ONT	TI	1.1-450-170-11	(Canadian)TRANSFORMER, POWER	
10	7-682-566-09	SCREW +B 4X20		T1	1.1-450-173-11 1.1-450-174-11	(AEP, WG)TRANSFORMER, POWER (UK)TRANSFORMER, POWER	
11	7-682-547-09	SCREW +BVTT 3X6 (S)				CONTRACTOR ON THE PROPERTY OF THE	•
12	4-847-802-00	SCREW	4	<b>_</b>			
			—	/—			

#### 4-2.CHASSIS, BACK PANEL



No.	Part No.	Description	Remarks	No.	Part No.	Description Remark	(S
51 52 53 54	7-682-547-09 7-685-647-79 4-812-134-00 *4-916-782-21	SCREW +BVTT 3X8 (S) SCREW +BVTP 3X10 TYPE2 SLIT RIVET NYLON, 3.5 DAMPER		907 908 909 910	1-533-190-11 *1-629-755-11 1-533-183-11 *1-629-753-15	(Canadian)CLIP, FUSE (Canadian)PC BOARD, AC OUTLET (EXCEPT Canadian)HOLDER, FUSE PC BOARD, SP TERMINAL	
55 57 59	7-685-873-09 7-685-650-79 7-685-648-79	SCREW +BVTT 3X10 (S) SCREW +BVTP 3X16 TYPE2 SLIT SCREW +BVTP 3X12 TYPE2 IT-3		911	*1-629-757-13 *1-635-839-11	(EXCEPT WG)PC BOARD, SP JAMPER (WG)PC BOARD, SP JAMPER	
60 61	*4-937-801-01 *4-916-732-01	BRACKET, SW BOARD, BOTTOM		912	*A-4334-889-A *A-4334-897-A *A-4334-900-A	(UK)MOUNTED PCB, MAIN	
62	*4-929-233-03 *4-929-233-11	(Canadian)PANEL, BACK (EXCEPT Canadian)PANEL, BACK		913	*A-4341-271-A *1-629-750-11	(WG)MOUNTED PCB, MAIN PC BOARD, A/B JUMPER	
63 64 65 66	7-621-849-00 7-685-874-09 4-921-941-31 3-703-270-00	SCREW, TAPPING SCREW +BYTT 3X12 (S) (UK)CUSHION (FL)		914	*1-629-758-13 *1-635-837-11	(EXCEPT WG)PC BOARD, PIN JACK (L) (WG)PC BOARD, PIN JACK (L)	
67 68	7-685-876-09 3-655-653-21	(Canadian)LABEL, AC 120V 60HZ SCREW +BYTT 3X16 (S) BAND (TAITON), BINDING		915	*1-629-756-12 *1-635-838-11	(EXCEPT WG)PC BOARD, PIN JACK (S) (WG)PC BOARD, PIN JACK (S)	
902 903 904 905	*1-635-841-11 *1-629-749-11 *1-629-751-11 *A-4410-962-A	PC BOARD, AC SW PC BOARD, HP PC BOARD, POWER LED MOUNTED PCB, SELECTOR		916	*A-4334-895-A *A-4334-898-A *A-4334-901-A		
906	*1-629-747-11	PC BOARD, MUTING		F501	*1-560-242-61 1:1-540-062-11 4:1-532-510-11 1:1-532-350-00	BUS BAR 2P (Canadian)OUTLET, AC (POLAR) (Canadian)FUSE, GLASE-TUBE (8A) (EXCEPT Canadian)FUSE, TIME-LAG (4A)	)

# **SECTION 5 ELECTRICAL PARTS LIST**

#### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS: MF: μF, PF: μμF.

#### RESISTORS

- All resistors are in ohms. F: nonflammable

#### COILS

MMH: mH, UH: μΗ

#### SEMICONDUCTORS

In each case, U: μ, for example: UA...: μΑ..., UPA...: μΡΑ..., UPC...: μPD...

The components identified by mark \( \sumeq \) or dotted line with mark \( \sumeq \) are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

· WG: West Germany model

0.6.0	5								
Ref.No.	Part No.	Description	Ref.	10.	Part No.	Description			
	1.1-574-383-11 1.1-574-884-11 1.1-575-105-11	(AEP,WG)CORD, POWER (UK)CORD, POWER (WITH CONNECTOR (Canadian)CORD, POWER	R) C16	59	1-162-284-31 1-162-284-31 1-162-284-31	(WG)CERAM (WG)CERAM (WG)CERAM	IC 150PF	10%	50V 50V 50V
902 903 904	*1-635-841-11 *1-629-749-11 *1-629-751-11	PC BOARD, AC SW PC BOARD, HP PC BOARD, POWER LED	C20 C20 C20	)2	1-130-475-00 1-130-485-00 1-130-483-00	MYLAR MYLAR MYLAR	0.0022MF 0.015MF 0.01MF	5% 5% 5%	50V 50V 50V
905 906 907	*A-4410-962-A *1-629-747-11 1-533-190-11	MOUNTED PCB, SELECTOR PC BOARD, MUTING (Canadian)CLIP, FUSE	C20 C20 C20	)5	1-136-164-00 1-123-369-00 1-123-380-00	FILM ELECT ELECT	0.082MF 4.7MF 1MF	5% 20% 20%	50V 50V 63V
908 909 910	*1-629-755-11 1-533-183-11 *1-629-753-15	(Canadian)PC BOARD, AC OUTLET (EXCEPT Canadian)HOLDER, FUSE PC BOARD, SP TERMINAL	C20 C21 C25	0	1-124-918-11 1-136-170-00 1-130-475-00	ELECT FILM MYLAR	47MF 0.27MF 0.0022MF	20% 5% 5%	63V 50V 50V
911 912	*1-629-757-13 *1-635-839-11 *A-4334-889-A	(EXCEPT WG)PC BOARD, SP JAMPER (WG)PC BOARD, SP JAMPER	C25 C25 C25	53	1-130-485-00 1-130-483-00 1-136-164-00	MYLAR MYLAR FILM	0.015MF 0.01MF 0.082MF	5% 5% 5%	50V 50V 50V
312	*A-4334-897-A *A-4334-900-A *A-4341-271-A	(AEP)MOUNTED PCB, MAIN (Canadian)MOUNTED PCB, MAIN (UK)MOUNTED PCB, MAIN (WG)MOUNTED PCB, MAIN	C26 C30 C30	)1	1-136-170-00 1-136-808-11 1-123-369-00	FILM FILM ELECT	0.27MF 100PF 4.7MF	5% 5% 20%	50V 100V 50V
913	*1-629-750-11	PC BOARD, A/B JUMPER	C30	-	1-104-276-11	POLYSTYRENE	68PF	10%	50 <b>v</b>
914	*1-629-758-13 *1-635-837-11	(EXCEPT WG)PC BOARD, PIN JACK (WG)PC BOARD, PIN JACK (			1-126-052-11 1-107-044-00	MICA	100MF 3PF	20% 0.5PF	50V 500V
915	*1-629-756-12 *1-635-838-11	(EXCEPT WG)PC BOARD, PIN JACK (WG)PC BOARD, PIN JACK (		7	1-123-369-00 1-123-369-00 1-104-263-00	ELECT ELECT POLYSTYRENE	4.7MF 4.7MF 15PF	20% 20% 10%	63V 63V 125V
916	*A-4334-895-A *A-4334-898-A *A-4334-901-A	(WG)MOUNTED PCB, EQ (AEP,Canadian)MOUNTED PCB, EQ (UK)MOUNTED PCB, EQ	C30 C31 C31	0	1-124-910-11 1-107-159-00 1-107-159-00	ELECT MICA MICA	47MF 33PF 33PF	20% 5% 5%	50V 500V 500V
917	*1-560-242-61	BUS BAR 2P	C31	2	1-130-487-00	(EXCEPT Canad	dian)		
C101 C102	1-162-284-31 1-162-284-31	(WG)CERAMIC 150PF 10% 5	50V C31	2	1-136-161-11	(Canadian)		0.022MF 0.047MF	5% 50V 50V
C103 C104 C105	1-162-284-31 1-162-284-31 1-162-284-31	(WG)CERAMIC 150PF 10% 5	50V C31 C31 C31 C31	4	1-130-471-00 1-123-333-00 1-130-487-00	MYLAR ELECT MYLAR	0.001MF 100MF 0.022MF	5% 20% 5%	50V 25V 50V
C106 C108 C109	1-162-284-31 1-162-284-31 1-162-284-31	(WG)CERAMIC 150PF 10% 5	60V C31 C31 C31	8 1	1-123-333-00 1-123-604-00 1-123-379-00	ELECT ELECT ELECT	100MF 220MF 0.47MF	20% 20% 20%	25V 63V 100V
C110 C110	1-162-284-31	(WG)CERAMIC 150PF 10% 5	50V C32 C32	1 1	1-125-460-11 1-125-460-11	ELECT ELECT	12000MF 12000MF		63V 63V
C152 C153	1-162-284-31 1-162-284-31 1-162-284-31	(WG)CERAMIC 150PF 10% 5	50V C32 50V C32	3 1	1-125-558-11 1-125-558-11	ELECT	5600MF	300	63V 63V
C154 C155	1-162-284-31	(WG)CERAMIC 150PF 10% 5	C32 C32 C32	6 1	1-136-880-11 1-136-161-11	FILM (Canadian)			160V 50V
C156	1-162-284-31	(WG)CERAMIC 150PF 10% 5	C33 C33 C33	2 1	-162-282-31  -162-282-31  -162-288-31	(WG)CERAMI (WG)CERAMI (WG)CERAMI	C 100PF	5%	50V 50V 50V

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description
C351 C352 C353	1-136-808-11 1-123-369-00 1-104-276-11	ELECT	100PF 4.7MF 68PF	5% 20% 10%	100V 50V 50V	CN8 CN9 CN10 CN11	*1-563-381-11 *1-566-451-11 *1-563-381-11 1-568-117-11	HOUSING, CONNECTOR 3P SOCKET, CONNECTOR 11P
C354 C355 C358	1-126-052-11 1-107-044-00 1-104-263-00	MICA	100MF 3PF	20% 0.5PF 10%	50V 500V 125V		1.\$1-540-062-11	(Canadian)OUTLET, AC (POLAR)
C359 C360	1-124-910-11 1-107-159-00	ELECT MICA	47MF 33PF	20% 5%	50V 500V	CP1 CP2	*1-560-532-00	PIN, CONNECTOR 7P PIN, CONNECTOR 7P
C361 C362	1-107-159-00 1-130-487-00	(EXCEPT Cana	33PF dian)	5%	500V	CP3 CP3A	*1-568-204-11 *1-560-532-00	
C362	1-136-161-11	MYLA (Canadian)	R 0.022MF	5% MF	50V 50V	CP4 CP5	*1-568-202-11 1-568-120-11	PIN, CONNECTOR (PC BOARD) 10P PIN, CONNECTOR (PC BOARD) 7P
C376 C380 C382	1-136-161-11 1-162-282-31 1-162-282-31	(Canadian) (WG)CERAM (WG)CERAM	IC 100PF	5%	50V 50V 50V	CP6 D201 D202	1-568-120-11 8-719-912-20 8-719-912-20	PIN, CONNECTOR (PC BOARD) 7P DIODE 188120 DIODE 188120
C401 C401	1-102-973-00 1-104-282-11	(WG)C (EXCEPT WG).	ERAMIC 100P	F 5%	50V 50V	D203 D204	8-719-303-00 8-719-303-00	
C402 C403	1-123-369-00 1-124-997-11	ELECT ELECT	4.7MF 470MF	20% 20% 3%	50V 10V 100V	D205 D206	8-719-303-00 8-719-302-23	LED SEL2510C-C (POWER) LED SEL2213C-C (POWER)
C404 C405 C406	1-130-341-00 1-130-971-00 1-123-333-00	FILM	0.056MF 0.016MF 100MF	3% 20%	100V 16V	D207 D208 D209		LED SEL2213C-C (POWER) LED SEL2810A-C (SOURCE DIRECT) LED SEL2810A-C (MUTING -20dB)
C407	1-130-470-00	ELECT	820PF 10MF	5% 20%	50V	D301 D302 D303	8-719-230-02 8-719-230-02 8-719-230-02	DIODE 30DF2-FC
C409 C410 C413	1-124-910-11 1-124-910-11 1-126-103-11	ELECT ELECT	47MF 47MF 470MF	20% 20% 20%	50V 50V	D304 D305 D306	8-719-230-02 8-719-200-82 8-719-200-82	DIODE 11ES2
C414 C420	1-126-103-11		470MF	20% 10%	16V 50V	D307 D308	8-719-200-82 8-719-200-82	
C430 C431	1-110-342-11 1-162-282-31	(WG)MYLAR (WG)CERAN		5% 5%	50V 50V	D309 D310	8-719-200-82 8-719-200-82	DIODE 11ES2 DIODE 11ES2
C451 C451	1-102-973-00 1-104-282-11	(WG) (EXCEPT WG).			50V 50V	D311 D312	8-719-200-82 8-719-912-20	DIODE 11ES2 DIODE 1SS120
C452 C453 C454	1-123-369-00 1-124-997-11 1-130-341-00	ELECT	4.7MF 470MF 0.056MF	20% 20% 3%	50V 10V 100V	D313 D314 D319	8-719-912-20 8-719-912-20 8-719-912-20	DIODE 1SS120
C455 C457 C458	1-130-971-00 1-130-470-00 1-126-059-11	MYLAR	0.016MF 820PF 10MF	3% 5% 20%	100V 50V 50V	D320 D362 D363	8-719-912-20 8-719-912-20 8-719-912-20	DIODE 1SS120 DIODE 1SS120 DIODE 1SS120
C470 C480 C481	1-162-282-31 1-110-342-11 1-162-282-31	(WG)CERAM (WG)MYLAF (WG)CERAM	390PF	10% 5% 5%	50V 50V 50V	D364 D401	8-719-912-20 8-719-000-84	DIODE 1SS120 DIODE UZL-7M1
C501 <u>i</u>	.1-161-941-11	(Canadian)	.CERAMIC 0.0	01MF	400V	EH1 EH2 EH3 EH4	*1-564-505-11 *1-564-508-11 *1-564-508-11 *1-564-511-11	(WG)PLUG, CONNECTOR 2P PLUG, CONNECTOR 5P PLUG, CONNECTOR 5P PLUG, CONNECTOR 8P
C902 C903 C904	1-136-153-00 1-136-153-00 1-102-115-00	(WG)FILM (WG)FILM (WG)CERAN	0.01MF 0.01MF MIC 560PF	5% 5% 10%	50V 50V 50V		1-532-510-11 1-532-350-00	(Canadian)FUSE, GLASE-TUBE (8A) (EXCEPT Canadian)FUSE, TIME-LAG (4A)
C906 C952 C953	1-162-286-31 1-136-153-00 1-136-153-00	(WG)CERAN (WG)FILM (WG)FILM	MIC 220PF 0.01MF 0.01MF	10% 5% 5%	50V 50V 50V	IC301 IC302 IC401	8-759-111-68	IC STK-3102N IC UPC1237HA IC RC4560D
C954 CN1	1-102-115-00 *1-561-651-00	(WG)CERAN		10%	50V		8-759-604-34 8-759-604-52	IC M5F7815L IC M5F7915L
CN2 CN3	*1-561-651-00 1-568-118-11	SOCKET, CON	NECTOR 7P NECTOR 16P			J102	*1-580-028-11 *1-580-027-11 *1-580-028-11	JACK, PIN 6P (TUNER/CD/TAPE 1,REC OUT) JACK, PIN 6P (TAPE 2 REC OUT) JACK, PIN 6P (ADAPTOR IN/OUT,DIRECT IN)
CN4 CN5 CN6 CN7	*1-562-334-00 *1-561-651-00 1-568-203-11 1-568-203-11	SOCKET, CONP PIN, CONNECT	NECTOR 7P FOR (PC BOAR)	D) 11P D) 11P	20		Note: The componen fied by mark / ted line with are critical for sReplace only w number specific	ts identi- Or dot- mark A safety. Ne les remplacer que par une pièce portant le numéro spéci-

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description				
J104 J501	1-568-250-21 1-507-863-51	JACK, PIN 2P (PHONO) JACK, LARGE TYPE (HEADPHONES)	R163 R164 R201	1-249-417-11 1-249-417-11 1-249-417-11	(WG)CARBON (WG)CARBON CARBON		5% 5% 5%	1/4W 1/4W 1/4W	
L301 L351 L401	1-428-133-11 1-428-133-11 1-424-397-11	COIL, AIR-CORE COIL, AIR-CORE (WG)COIL, CHOKE 200UH	R202 R203 R204	1-247-700-11 1-247-132-00 1-247-718-11	CARBON	100 1.1K	5%	1/4W 1/4W 1/4W	
L402 L451 L452	1-424-397-11 1-424-397-11 1-424-397-11	(WG)COIL, CHOKE 200UH (WG)COIL, CHOKE 200UH (WG)COIL, CHOKE 200UH	R205 R206 R208	1-249-753-15 1-249-753-15 1-247-162-00	CARBON CARBON CARBON	4.7M 4.7M 20K		1/4W 1/4W 1/4W	
Q201 Q202 Q203	8-729-140-96 8-729-194-57 8-729-141-03	TRANSISTOR 2SD774-34 TRANSISTOR 2SC945-P TRANSISTOR 2SA733-QP	R209 R212 R213	1-247-718-11 1-249-465-11 1-247-152-00	CARBON CARBON CARBON	2.7K 47K 8.2K	5% 5% 5%	1/4W 1/4W 1/4W	
Q204 Q302 Q301	8-729-141-03 8-729-107-53 8-729-203-45	TRANSISTOR 2SA733-QP TRANSISTOR 2SC2275A TRANSISTOR 2SC3423-0	R214 R215 R216	1-247-693-11 1-247-754-11 1-247-754-11	CARBON CARBON CARBON	27 1.5K 1.5K	5% 5% 5%	1/4W 1/2W 1/2W	
Q303 Q304 Q305	8-729-190-53 8-729-320-03 8-729-320-01	TRANSISTOR 2SA985 TRANSISTOR 2SC2921M-0 TRANSISTOR 2SA1215M-0	R217 R218 R219	1-247-750-11 1-249-462-11 1-249-465-11	CARBON CARBON CARBON	680 22K 47K	5% 5% 5%	1/2W 1/4W	
Q306 Q351 Q352	8-729-108-14 8-729-203-45 8-729-107-53	TRANSISTOR 2SA988-F TRANSISTOR 2SC3423-O TRANSISTOR 2SC2275A	R220 R221	1-247-749-11 1-247-717-11	CARBON CARBON	560 2.2K	5% 5%	1/4W 1/2W 1/4W	
Q353 Q354 Q355	8-729-190-53 8-729-320-03 8-729-320-01	TRANSISTOR 2SA985A TRANSISTOR 2SC2921M-O TRANSISTOR 2SA1215M-O	R222 R223 R224	1-247-725-11 1-249-465-11 1-247-721-11	CARBON CARBON CARBON	10K 47K 4.7K	5% 5%	1/4W 1/4W 1/4W	_
Q356 Q401 Q402	8-729-108-14 8-729-354-52 8-729-354-52		R226 . R227 .	6.1-247-743-11 6.1-215-892-11 6.1-215-892-11	METAL OXIDE METAL OXIDE	220 1K 1K	5% 5%	1/2W 2W 2W	F
Q451 Q452		TRANSISTOR 2SC2545 TRANSISTOR 2SC2545	R251 R252 R253	1-249-417-11 1-247-700-11 1-247-132-00	CARBON CARBON CARBON	1K 100 1.1K		1/4W 1/4W 1/4W	
RO00 R101 R102	1-247-725-11 1-246-545-00 1-246-545-00	CARBON 10K 5% 1/4W CARBON 1M 5% 1/4W CARBON 1M 5% 1/4W	R254 R255 R256	1-247-718-11 1-249-753-15 1-249-753-15	CARBON CARBON CARBON	2.7K 4.7M 4.7M	5%	1/4W 1/4W 1/4W	
R103 R104 R105	1-246-545-00 1-246-545-00 1-247-713-11	CARBON 1M 5% 1/4W CARBON 1M 5% 1/4W CARBON 1K 5% 1/4W	R258 R259 R262	1-247-162-00 1-247-718-11 1-249-465-11	CARBON CARBON CARBON	20K 2.7K 47K	5% 5% 5%	1/4W 1/4W 1/4W	
R106 R107 R108	1-249-417-11 1-246-545-00 1-246-545-00	CARBON 1K 5% 1/4W CARBON 1M 5% 1/4W CARBON 1M 5% 1/4W	R263 R301 R302		CARBON CARBON	8.2K 1K 100K	5% 5%	1/4W 1/4W	
R109 R110 R111	1-249-417-11 1-249-417-11 1-249-417-11	(WG)CARBON 1K 5% 1/4W (WG)CARBON 1K 5% 1/4W (WG)CARBON 1K 5% 1/4W	R303 R304	1-249-668-11	CARBON CARBON	620 1K	5% 5%	1/4W 1/2W 1/4W	
R112 R113 R114	1-249-417-11 1-249-417-11 1-249-417-11	(WG)CARBON 1K 5% 1/4W (WG)CARBON 1K 5% 1/4W (WG)CARBON 1K 5% 1/4W	R306 .	1.1-212-895-01 1.1-212-990-00	FUSIBLE FUSIBLE FUSIBLE	390 220 4.7	5% 5% 5%	1/4W 1/2W 1/2W	F
R1 51 R1 52 R1 53	1-246-545-00 1-246-545-00 1-246-545-00	CARBON 1M 5% 1/4W CARBON 1M 5% 1/4W CARBON 1M 5% 1/4W	R308 R309 R310	1-212-950-00 1-217-611-00	RES, METAL PLA			1/2W 2W 2W	F
R1 54 R1 55 R1 56	1-246-545-00 1-247-713-11 1-249-417-11	CARBON 1M 5% 1/4W CARBON 1K 5% 1/4W CARBON 1K 5% 1/4W	R312	1-247-717-11 1-249-460-11 1-212-962-00		2.2K 15K	5% 5% 5%	1/4W 1/4W 1/2W	
R1 57 R1 58 R1 59	1-246-545-00 1-246-545-00 1-249-417-11	CARBON 1M 5% 1/4W CARBON 1M 5% 1/4W (WG)CARBON 1K 5% 1/4W		1-212-962-00 1-247-891-00	FUSIBLE CARBON	15 330K 10K	5% 5% 5%	1/214	F
R1 60 R1 61	1-249-417-11 1-249-417-11	(WG)CARBON 1K 5% 1/4W (WG)CARBON 1K 5% 1/4W	R317 R318	1-247-887-00 1-247-881-00	CARBON CARBON	220K 120K	5% 5%	1/441	
R162	1-249-417-11	(WG)CARBON 1K 5% 1/4W	R319 R320 R321	1-249-432-11 1-247-721-11 1-249-467-11	CARBON	18K 4.7K 68K	5% 5% 5%	1/44	F

Note:
The components identified by mark A or dotted line with mark Replace only with part number specified.

Note:

Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

		•
Ref.No. Part No.	Description	Ref.No. Part No. Description
R323 d.1-212-849-00 R324 1-247-727-11 R325 d.1-212-998-00 R326 1-249-721-11	FUSIBLE 4.7 5% 1/4W F CARBON 10 5% 1/2W FUSIBLE 470 5% 1/2W F CARBON 100K 5% 1/2W	R467 1-249-844-11 CARBON 56K 5% 1/2W R468 1-249-818-11 CARBON 4.7K 1% 1/2W R469 1-247-713-11 CARBON 1K 5% 1/4W
R327 1-247-717-11 R327 1-249-552-11	(WG)CARBON 2.2K 5% 1/4W (EXCEPT WG)CARBON 1K 5% 1/4W	R481 1-259-428-11 (WG)CARBON 1K 5% 1/6W R482 1-259-428-11 (WG)CARBON 1K 5% 1/6W R902 1-247-727-11 (WG)CARBON 10 5% 1/2W
R351 1-247-713-11 R352 1-249-469-11 R353 1-249-668-11	CARBON 1K 5% 1/4W CARBON 100K 5% 1/4W CARBON 620 5% 1/2W	R903 1-247-727-11 (WG)CARBON 10 5% 1/2W R952 1-247-727-11 (WG)CARBON 10 5% 1/2W R953 1-247-727-11 (WG)CARBON 10 5% 1/2W
R354 ±.1-249-417-11 R355 ±.1-212-895-00 R356 ±.1-212-990-00	CARBON 1K 5% 1/4W F FUSIBLE 390 5% 1/4W F FUSIBLE 220 5% 1/2W F	RT301 1-237-455-11 RES, ADJ, CARBON 500 (IDLING) RT351 1-237-455-11 RES, ADJ, CARBON 500 (IDLING)
R357 i.1-212-950-00 R358 i.1-212-950-00 R359 1-217-611-00	FUSIBLE 4.7 5% 1/2W F	RV101 1-241-162-11 RES, VAR, CARBON 250K/250K (BALANCE) RV102 1-241-163-11 RES, VAR, CARBON 125K (TREBLE) RV103 1-241-164-11 RES, VAR, CARBON 260K (BASS) RV104 1-241-165-11 RES, VAR, CARBON 40K/40K (ATTENUATOR)
R360 1-217-611-00 R361 £.1-247-717-11 R362 1-249-460-11	RES, METAL PLATE 0.1 2W CARBON 2.2K 5% 1/4W F CARBON 15K 5% 1/4W	RY301 1-515-676-11 RELAY RY302 1-515-676-11 RELAY
R363 1.1-212-962-00 R364 1.1-212-962-00 R365 1-247-891-00	FUSIBLE 15 5% 1/2W F FUSIBLE 15 5% 1/2W F	S201 1-571-824-11 SWITCH, ROTARY (INPUT SELECTOR) S202 1-571-826-11 SWITCH, ROTARY (INPUT SELECTOR) S203 1-571-823-11 SWITCH, ROTARY SLIDE (REC OUT SELECTOR)
R374 1-247-727-11 R375 3.1-212-998-00 R376 1-249-721-11	FUSIBLE 470 5% 1/2W F	S204 1-571-828-11 SWITCH, PUSH (1 KEY)(SOURCE DIRECT) S205 1-572-417-11 SWITCH, PUSH (2 KEY)(MUTING/SUBSONIC) S206 1-571-822-11 SWITCH, ROTARY SLIDE (SPEAKERS)
R377 1-247-552-11 R377 1-247-717-11		S207 1-571-825-11 SWITCH, ROTARY (MODE) S401 1-571-111-11 SWITCH, PUSH (1 KEY)(CARTRIDGE) S501 A-1-554-920-11 SWITCH, PUSH (AC POWER)(1 KEY)(POWER)
R401 :.1-216-459-00 R402 :.1-215-895-11 R405 1-247-706-11	METAL OXIDE 3.3K 5% 2W F	T1 (.1-450-170-11 (Canadian)TRANSFORMER, POWER T1 (.1-450-173-11 (AEP,WG)TRANSFORMER, POWER T1 (.1-450-174-11 (UK)TRANSFORMER, POWER
R406 1-249-469-11 R407 1-247-700-11 R408 1-249-469-11	CARBON 100 5% 1/4W	TM501 1-537-228-11 (WG)TERMINAL BOARD (SP) TM501 1-537-235-11 (EXCEPT WG)TERMINAL BOARD (SP)
R409 1-247-710-11 R410 1-247-710-11 R411 1-247-725-11	CARBON 560 5% 1/4W	VH4 *1-564-321-00 (EXCEPT Canadian)PIN, CONNECTOR 2P VH5 *1-565-792-11 (EXCEPT Canadian)PIN, CONNECTOR 2P VH6 *1-564-321-00 (EXCEPT Canadian)PIN, CONNECTOR 2P VH8 *1-564-241-00 PIN, CONNECTOR 4P
R412 1-249-484-11 R413 1-247-739-11 R414 1-247-138-00	CARBON 100 5% 1/2W	VH10 *1-564-321-00 (Canadian)PIN, CONNECTOR 2P VH11 *1-565-792-11 (Canadian)PIN, CONNECTOR 2P VH12 1-564-320-00 PIN, CONNECTOR 2P
R415 1-249-542-11 R416 1-214-937-00 R417 1-249-844-11	CARBON 1M 5% 1/2W	VH15 *1-565-792-11 PIN, CONNECTOR 2P
R418 1-249-818-11 R419 1-247-713-11 R431 1-259-428-11	CARBON 1K 5% 1/4W	ACCESSORY & PACKING MATERIAL
R432 1-259-428-11 R455 1-247-706-11		*3-703-710-41 STICKER, SONY SYMBOL (12)
R456 1-249-469-11		3-752-025-11 (AEP,UK,Canadian)MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)
R457 1-247-700-11 R458 1-249-469-11 R459 1-247-710-11	CARBON 100K 5% 1/4W	3-752-025-41 (AEP, WG)MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, 1TALIAN)
R460 1-247-710-11 R461 1-247-725-11 R462 1-249-484-11	CARBON 10K 5% 1/4W	*4-929-219-01 CUSHION *4-937-830-01 INDIVIDUAL CARTON
R463 1-247-739-11 R465 1-249-542-11 R466 1-214-937-00	CARBON 390 5% 1/4W	Note: The components identifies by mark \( \underset \) or dotted line with mark are critical for safety. Replace only with part number specified.  Note: Les composants identifiés par une marque \( \underset \underset \) sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

English 90G1646-1 Printed in J.apan © 19•90.7